

REMARKS:Claims 1, 2, 7, 8

Claims 1, 2, 7, and 8 have been rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. Applicant respectfully disagrees that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that Applicant has possession of the invention.

Particularly, the rejection indicates that the phrase “adjusting a magnitude of said external magnetic field to cause the magnetization of said ferromagnetic layer in said bias tabs to be substantially perpendicular to the direction of said external magnetic field” was not originally described in the specification.

Applicant respectfully disagrees. The Examiner is directed to p. 19, line 13 of the specification as filed. The paragraph beginning at that location is reproduced below:

In the discussion of the spin-flop effect illustrated in Fig. 4a-d, the direction of the applied external field 410 is shown along the direction of the long axis of the free layer. This is also parallel to the surface of the disk. However, for the structure shown in Fig. 5 the direction of the initialization field 509 should be perpendicular to the desired direction of magnetization 511 of the free layer 505. This direction aligns the magnetization 513 in the pinned layer 503 and permits the spin-flop effect to rotate the magnetization 512 of the ferromagnetic layer 507 of the bias tabs 90° relative to the applied field 509. This must be done at the optimum external field strength. (emphasis added)

This quote indicates that an external magnetic field (initialization field 509) is applied to the ferromagnetic layer in the bias tabs to be perpendicular to the field by manipulating the spin-flop effect. The spin-flop effect is shown in FIGS. 4a-c and related discussion (p. 15, line 14 to p. 17, line 13). As shown in FIGS. 4a-c, and as described in the discussion of FIGS. 4a-c, to manipulate the spin-flop effect, the

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magnitude of the external field begins high (FIG. 4a) and is adjusted to arrive at the optimum field (FIG. 4c).

Accordingly, the limitation objected to was fully disclosed in the specification in such a way that one skilled in the art would have been able to reproduce the invention, and so would have been apprised that Applicant was in possession of the claimed invention at the time the application was filed.

Claims 1, 2, 7, 8

Claims 1, 2, 7, and 8 have been rejected under 35 USC 102(e) as being unpatentable over Lin et al. (US6175475).

Claim 1 has been amended in a manner believed to overcome Lin. Particularly, claim 1 now recites the limitation that there be two bias tabs (510), as shown in FIG. 5 of the present application. In contrast, the rejection relies on a spacer layer (415), pinned layer (420), and antiferromagnetic layer (430) to show a biasing tab. Because Lin fails to teach or even suggest dual bias tabs, claim 1 is novel over Lin.

Accordingly, claim 1 is believed to be allowable over Lin. Reconsideration and allowance of claim 1 is respectfully requested.

Claims 2, 7 and 8 depend from claim 1, and therefore incorporate the limitations of claim 1. By virtue of their dependence, claims 2, 7 and 8 are also believed to be allowable. Reconsideration and allowance of claims 1, 2, 7 and 8 is respectfully requested.

Claims 4-6

Applicant acknowledges and appreciates allowance of claims 4-6.

In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 971-2573. For payment of any additional fees due in connection with the filing of this paper, the Commissioner

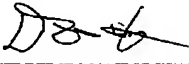
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is authorized to charge such fees to Deposit Account No. 09-0466 (Order No. SJO9-2000-0124US2).

Respectfully submitted,

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Date: 7/28/15

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